

PERMIT AMENDMENT NO. 3674-313-0165-S-01-3
ISSUANCE DATE:



GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Quality – Permit Amendment

In accordance with The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Rules, Chapter 391-3-1, adopted pursuant to or in effect under that Act, Permit No. 3674-313-0165-S-01-0 issued on September 7, 2018 to:

Facility Name: Hanwha Q Cells USA, Inc.
Facility Address: 300 Nexus Drive
Dalton, Georgia 30721 (Whitfield County)
Mailing Address: 300 Nexus Drive
Dalton, Georgia 30721
Facility AIRS Number: 04-13- 313-00165

for the following: The operation of five assembly lines for a Photovoltaic Module manufacturing facility is hereby amended as follows: The construction and operation of two additional module assembly lines (ID No. PR03).

Reason for Amendment: Application No. 28606, dated September 21, 2022.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached 3 pages.

This Permit Amendment is hereby made a part of Permit No. 3674-313-0165-S-01-0 and compliance herewith is hereby ordered. Except as amended hereby, the above referenced Permit remains in full force and effect.



Richard E. Dunn, Director
Environmental Protection Division

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2. Allowable Emissions

New Condition

2.5 The Permittee shall not cause, let, suffer, permit, or allow any emissions from any fuel burning equipment which:

a. For fuel burning equipment less than 10 MMBtu/hr. heat input — contain fly ash and/or other particulate matter in amounts equal to or exceeding 0.5 pounds per million BTU heat input.
[391-3-1-.02(2)(d)2.(i)]

b. For fuel burning equipment greater than or equal to 10 MMBtu/hr. heat input and equal to or less than 250 MMBtu/hr. heat input — contain fly ash and/or other particulate matter in amounts equal to or exceeding the rate derived from the equation noted below:
[391-3-1-.02(2)(d)2.(ii)]

$$P = 0.5(10/R)^{0.5}$$

Where P equals the allowable PM emission rate in pounds per million BTU and R equals the heat input in millions BTU per hour.

c. For all fuel-burning equipment— exhibit visible emissions, the opacity of which is equal to or greater than 20 percent except for one six-minute period per hour of not more than 27 percent opacity.
[391-3-1-.02(2)(d)3.]

6. Performance Testing

New Condition

6.2 Within 120 days after achieving the maximum production for the Solar Cell Module Assembly Process (ID No PR03), the Permittee shall conduct a performance test on PR03's tabbing and lamination process to determine the formaldehyde forming rates from this process, in pound formaldehyde per pound of product. The test shall be conducted at the maximum operating capacities of all the associated emission units and control devices.

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7. Notification, Reporting and Record Keeping Requirements

Modified Conditions

7.2 The Permittee shall maintain monthly usage records of all VOC containing materials used entire facility and the total weight of products that went through tabbing and lamination processes of all process lines. These records shall include the total weight of each material used and the VOC content of each material (expressed as a weight percentage). If the Permittee wishes to subtract the volatile content of waste materials from the VOC emissions calculations, the records must also indicate the weight of any containerized material disposed as waste, the VOC content of the containerized waste material, and documentation of the method for determining the VOC content of the waste material.

[391-3-1-.02(6)(b)1, 391-3-1-.03(2)(c)]

7.3 The Permittee shall use the records required in Conditions 6.2 and 7.2 to calculate combined total monthly VOC emissions from entire facility. All demonstration calculations, including any Division-approved emission factor, control efficiency and/or coating transfer efficiency used in the calculations, shall be kept as part of the records required in Condition 7.2. The Permittee shall notify the Division in writing if the combined total monthly VOC emissions from entire facility exceed 8.33 tons during any calendar month. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limit in Condition 2.1.

[391-3-1-.02(6)(b)1, 391-3-1-.03(2)(c)]

7.5 The Permittee shall use the following equations when calculating the monthly VOC emissions from the entire facility in accordance with Condition No. 7.2. All calculations should be kept as part of the monthly record. These records shall be kept available for inspection by or submittal to the Division for five years from the date of record.

[391-3-1-.02(6)(b)1 and 391-3-1-.03(2)(c)]

- a. $VOC_i \text{ (lbs.)} = \text{Material use (lbs.)} * (\% \text{ weight VOC}); \text{ or}$
- b. $VOC_i \text{ (lbs.)} = \text{Material used (gallons)} * (\text{VOC Content lbs./gallon}); \text{ or}$
- c. $VOC_w \text{ (lbs.)} = \text{Waste Material (lbs.)} * (\% \text{ weight VOC}); \text{ or}$
- d. $VOC_w \text{ (lbs.)} = \text{Waste Material (gallons)} * (\text{VOC Content lbs./gallon})$
- e. $\text{Total VOC (lbs.)} = (\sum_{i=1}^n VOC_i - \sum_{i=1}^n VOC_w) + EF_{\text{Tabbing}} * P_{\text{Tabbing}}$

Where:

EF_{Tabbing} = Tabbing and lamination formaldehyde forming rates, determined in accordance with Condition 6.2, in pounds formaldehyde per pound product.

P_{Tabbing} = Total monthly amount of tabbed and laminated products of all manufacturing lines, determined in accordance with Condition 7.2, in pounds product per month.

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7.6 The Permittee shall maintain monthly usage records of all HAP containing materials used in the entire facility and the total weight of products that went through tabbing and lamination processes of all process lines. These records shall include the total weight of each material used and the HAP content of each material (expressed as a weight percentage). If the Permittee wishes to subtract the HAP content of waste materials from the HAP emissions calculations, the records must also indicate the weight of any containerized material disposed as waste, the HAP content of the containerized waste material, and documentation of the method for determining the HAP content of the waste material.

[391-3-1-.02(6)(b)1, 391-3-1-.03(2)(c)]

7.7 The Permittee shall use the records obtained in accordance with Conditions 6.2 and 7.6 to determine the total monthly emissions of combined hazardous air pollutants and the total monthly emissions of each listed hazardous air pollutant from entire facility. All demonstration calculations, including any Division-approved emission factor, control efficiency and/or coating transfer efficiency used in the calculations, shall be kept as part of the records required in Condition 7.6. The Permittee shall notify the Division in writing if emissions of any individual hazardous air pollutant exceed 0.83 tons from entire facility, or if emissions of all listed hazardous air pollutants combined exceed 2.08 tons from entire facility, during any calendar month. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limit in Condition 2.2.

[391-3-1-.02(6)(b)1, 391-3-1-.03(2)(c)]

7.9 The Permittee shall use the following equations when calculating the monthly HAP emissions from the entire facility in accordance with Condition No. 7.6. All calculations should be kept as part of the monthly record.

[391-3-1-.02(6)(b)1, 391-3-1-.03(2)(c)]

- a. HAP_i (lbs.) = Material use (lbs.) * (%weight HAP); or
- b. HAP_i (lbs.) = Material used (gallons) * (HAP Content lbs./gallon); or
- c. HAP_w (lbs.) = Waste Material (lbs.) * (%weight HAP); or
- d. HAP_w (lbs.) = Waste Material (gallons) * (HAP Content lbs./gallon)
- e. $Total\ HAP\ (lbs.) = \left(\sum_{i=1}^n HAP_i - \sum_{w=1}^n HAP_w \right) + EF_{Tabbing} * P_{Tabbing}$

New Condition

7.11 The Permittee shall furnish the Division written notification as follows:

[391-3-1-.02(6)(b)1(i)]

- a. The actual date of initial startup of the new module assembly lines (ID No. PR03), within 15 days after such date.
- b. Certification that a final inspection has shown that construction has been completed in accordance with the application, plans, specifications, and supporting documents submitted in support of the Permit within 60 days after the initial startup.